

MILITARY MEDICAL RESEARCH IN SUPPORT OF NATIONAL INSTRUMENTS OF POWER

BY

COLONEL DANIEL H. JIMENEZ
United States Army

DISTRIBUTION STATEMENT A:

Approved for Public Release.
Distribution is Unlimited.

USAWC CLASS OF 2009

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.



U.S. Army War College, Carlisle Barracks, PA 17013-5050

The U.S. Army War College is accredited by the Commission on Higher Education of the Middle State Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 26-03-2009		2. REPORT TYPE Strategy Research Project		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Military Medical Research in Support of National Instruments of Power				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Colonel Daniel H. Jimenez				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Commander James R. Greenburg Department of National Security and Strategy				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army War College 122 Forbes Avenue Carlisle, PA 17013				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution A: Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT At the dawn of this new millennium, there are few threats more menacing to mankind than the global Human ImmunoDeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) pandemic. The current national security strategy and national military strategy acknowledge the threat posed by infectious diseases like HIV/AIDS and the potential adverse effects pandemic diseases have to vital U.S. interests. This strategy research project examines how military medical research serves as a soft power asset and reveals how military medical research strengthens the nation's diplomatic, informational, military, and economic instruments of national power. Improving the health of people in other countries makes both strategic and moral sense and could become an integral part of future U.S. foreign policy. Beyond enhancing security, prosperity, and democracy, a vigorous international health policy, actively supported by a robust program of military medical research, will enhance U.S. global leadership. Giving higher priority to global health in foreign policy is good for the United States and good for the world.					
15. SUBJECT TERMS HIV/AIDS, PEPFAR, National Security, Global Public Health					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UNLIMITED	18. NUMBER OF PAGES 28	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code)

USAWC STRATEGY RESEARCH PROJECT

**MILITARY MEDICAL RESEARCH IN SUPPORT OF NATIONAL INSTRUMENTS OF
POWER**

by

Colonel Daniel H. Jimenez
United States Army

Commander James R. Greenburg
Project Adviser

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

ABSTRACT

AUTHOR: Colonel Daniel H. Jimenez

TITLE: Military Medical Research in Support of National Instruments of Power

FORMAT: Strategy Research Project

DATE: 26 March 2009 WORD COUNT: 5,471 PAGES: 28

KEY TERMS: HIV/AIDS, PEPFAR, National Security, Global Public Health

CLASSIFICATION: Unclassified

At the dawn of this new millennium, there are few threats more menacing to mankind than the global Human ImmunoDeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) pandemic. The current national security strategy and national military strategy acknowledge the threat posed by infectious diseases like HIV/AIDS and the potential adverse effects pandemic diseases have to vital U.S. interests. This strategy research project examines how military medical research serves as a soft power asset and reveals how military medical research strengthens the nation's diplomatic, informational, military, and economic instruments of national power. Improving the health of people in other countries makes both strategic and moral sense and could become an integral part of future U.S. foreign policy. Beyond enhancing security, prosperity, and democracy, a vigorous international health policy, actively supported by a robust program of military medical research, will enhance U.S. global leadership. Giving higher priority to global health in foreign policy is good for the United States and good for the world.

MILITARY MEDICAL RESEARCH IN SUPPORT OF NATIONAL INSTRUMENTS OF POWER

I was a soldier. But I know of no enemy in war more insidious or vicious than AIDS . . . an enemy that poses a clear and present danger to the world.

—U.S. Secretary of State Colin Powell (2001)¹

At the dawn of this new millennium, there are few threats more menacing to mankind than the global Human ImmunoDeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) pandemic. Without question, this pandemic not only captures headlines in all forms of the news media but also poses a serious threat across the world. It serves as a reminder of the significant threat that a pandemic disease of any kind can pose to the national security and vital interests of the United States (U.S.). In the midst of this threat, however, lies an opportunity. Infecting over forty million people and already accounting for more than twenty-five million deaths, the HIV/AIDS pandemic seems destined to become the world's worst health crisis in modern history.² Centered today in sub-Saharan Africa, it is the leading cause of death in that region (eighty-three percent of all deaths are HIV/AIDS related).³ HIV/AIDS is spreading rapidly in India, China, Central Asia, and Russia – left unchecked it could pose a dangerous direct threat to the U.S. While HIV/AIDS has the potential to result in a humanitarian catastrophe of unimagined dimensions, it also threatens global economic and geopolitical stability. Thus it constitutes a critical strategic threat to the U.S. and our allies around the world.⁴

U.S. contributions to the health of people in other countries makes both strategic and moral sense and is arguably an integral part of future U.S. foreign policy. Beyond enhancing security, prosperity, and democracy, a vigorous international health policy

enhances U.S. global leadership. Giving higher priority to global health in foreign policy is good for the United States and good for the world.

Global Public Health and National Security

By placing global health at the forefront of its foreign policy agenda, the U.S. can secure strategic advantages that have the potential to promote and protect our core national interests: security of the homeland, economic prosperity, stable international order, and promotion of democracy and American values in developing countries.⁵ The scope and complexity of the threat posed by HIV/AIDS and other potential pandemic diseases make a “whole-of-government” approach to addressing them imperative.

The emerging dangers to global stability posed by pandemic disease make giving high priority to global health a prudent policy choice.⁶ In addition to the fear of biological weapons causing a catastrophic spread of disease, Americans may be at greater risk now than at any other time in the past twenty years from recognized and emerging infectious diseases prevalent around the globe.⁷ These diseases are resurgent on nearly all continents and have the potential to spread easily across permeable national borders in our globally interconnected world. This challenge is compounded by the rising incidence of life-threatening chronic diseases in developing countries with whom the U.S. seeks to improve both diplomatic and economic ties.⁸ Deteriorating health conditions also create political risks in countries of strategic importance to the U.S. like those in the sub-Saharan African region, since poor public health status “increases the likelihood of political instability, disenfranchises persons with inadequate social capital, limits economic growth, and magnifies the human damage caused by social and economic dislocation.”⁹ Addressing global health

challenges requires the addition of new tools to an integrated “whole of government” approach to foreign policy. One of these new tools is military medical research. Military medical research offers a range of benefits if properly utilized, among them “improved global disease surveillance systems, investment in health education and information technology, workforce training, immunization and other methods of disease prevention, building and equipping facilities for prevention and treatment, and increasing access to affordable treatment and care.”¹⁰

Military Medical Research, Security Strategy and National Interests

The U.S. National Security Strategy (NSS), the National Strategy for Homeland Security (NSHS), the Department of State (DoS) and U.S. Agency for International Development (USAID) Strategic Plan, as well as many other Department of Defense (DoD) policy and strategy documents, directly address the issue of pandemic diseases and their potential impact on U.S. strategic interests. The entire spectrum of U.S. governmental policy and strategy now concurs that the HIV/AIDS pandemic threatens vital U.S. interests. Specifically, the NSS clearly declares that HIV/AIDS is a threat to the vital interests of the U.S. both at home and abroad. A key goal of the U.S. government is to turn the tide against HIV/AIDS and other infectious diseases by implementing the President’s Emergency Plan for AIDS Relief (PEPFAR) program. PEPFAR is an unprecedented, five year \$15 billion dollar effort that builds on the documented success of pioneering programs in Africa, like those undertaken by the U.S. Military HIV Research Program (USMHRP).¹¹ In direct support of national policy, Army medical research, through the scientific efforts of the U.S. Army Medical Research and Materiel Command (MRMC), is taking a lead in the prevention, surveillance, care,

and treatment of pandemic diseases. Additionally, MRMC scientists are developing mechanisms to improve the capacity to detect and respond to biological and chemical attacks, to identify and secure dangerous pathogens, and to develop methods to limit the spread of materials that can be used in the development of biological weapons.¹²

The participation of USMHRP in the PEPFAR initiative and in many other ongoing health related programs in sub-Saharan Africa and other hotspots in the world affirms how military medical research can be used as a strategic instrument to promote and protect national interests. In Tanzania alone, the PEPFAR initiative, administered by the USMHRP, has been supporting both military and civilian organizations committed to fighting HIV/AIDS for the last four years. This program has provided over \$817 million dollars to the Tanzanian government towards combating this disease.¹³

The U.S. National Strategy for Homeland Security (NSHS) is another key governmental document that recognizes the importance of military medical research in providing a safety net based on early warnings of infectious diseases that have the potential to adversely affect the American people, critical infrastructure, and access to key resources.¹⁴ The NSHS points out that in order for the U.S. to succeed in stopping the spread of deadly diseases, multilateral cooperation must be an enduring feature of our approach to containing infectious and pandemic threats that transcend jurisdictional and geographical boundaries. Accordingly, the U.S. needs to develop and strengthen foreign partnerships and the homeland security capabilities of our friends and allies.¹⁵ As outlined in the NSHS, “reducing the Nation’s vulnerability to public health threats requires that we continue to build sustainable systems for prevention, detection, reporting, investigation, control, and recovery of pandemic diseases.”¹⁶ The NSHS also

notes, “our efforts include, among other things, protecting our population from infectious diseases and catastrophic public health threats, as well as reducing the effects and consequences of all hazards through improved systems to notify, alert, and warn the public.”¹⁷ Through MPMC, the Army medical research community, is directly involved with other government agencies in developing capabilities to monitor in real time public health indicators and to develop clinical surveillance techniques to identify and assess threats and determine if an attack or outbreak has occurred.¹⁸ The USMHRP is conducting ongoing research in the identification, surveillance, and early warning for diseases like HIV/AIDS, malaria, and tuberculosis. USMHRP programs directly support the policy and strategy outlined in the NSHS and nests well with the NSS.

Army military medical research programs have a long history of working with DoS and USAID.¹⁹ The 2007-2012 DoS and USAID Strategic Plan, clearly specifies in its third strategic goal, “Investing in People”, the nation’s unwavering commitment to counter the unique threat that HIV/AIDS poses to public health and development throughout the world.²⁰ The HIV/AIDS pandemic threat requires immediate, coordinated, and sustained intervention among agencies, host governments, and international partners. Combining diplomatic efforts to bring parties together with direct foreign assistance has been part of the support provided by USMHRP for over the past ten years.²¹ The DoS and USAID Strategic Plan specifies that the DoD “coordinates on health programs in post-conflict situations and provides military-to-military assistance to fight HIV/AIDS in military populations.”²² The Strategic Plan also addresses the problem of HIV/AIDS in its sixth strategic goal, “Promoting International Understanding”, because the disease is seen as a key impediment for the development of a sound democracy

and for improving economic development as a path to a productive future. Further, successful U.S. efforts to curb the HIV/AIDS pandemic enables us to discredit terrorist ideologies in HIV/AIDS stricken unstable states.²³ The person-to-person contacts that the USMHRP staff has with the local African population in carrying out their research and humanitarian missions, military-to-military contacts, and the good will with the civilian population clearly supports the goals and objectives of the DoS and USAID Strategic Plan for 2007-2012.

Military Medical Research and Soft Power

Military medical research is what some would consider a mechanism to exploit “soft power.” Joseph S. Nye, Jr., a former Assistant Secretary of Defense and Dean of Harvard University's John F. Kennedy School of Government, defines soft power as:

The ability to get what you want through attraction rather than coercion and payments. It arises from the attractiveness of a country's culture, political ideals, and policies. When our policies are seen as legitimate in the eyes of others our soft power is enhanced.²⁴

U.S. soft power emanates from three sources: its culture, when it is regarded as attractive by other state and non-state actors; its political values, when they are validated by action both at home and abroad; and its foreign policies, when they are viewed as moral and legitimate.²⁵ Acknowledgement that soft power is a vital asset is found in the recently released Field Manual (FM) 3-07, Stability Operations. As outlined in FM 3-07, America's future effectiveness in nation-building depends on our ability to work through and with a community of supportive nations to defeat insurgencies, to assist fragile and developing states, and to provide vital humanitarian support to the suffering.²⁶ These long-term goals will require new ways to generate soft power and “promote participation in government, improve information awareness, spur economic

development, and address the root causes of conflict among the disenfranchised populations of the world.”²⁷ The humanitarian support and development of improved healthcare infrastructure provided by USMHRP in its HIV/AIDS research programs meets the requirements of soft power generation as outlined in FM 3-07. USMHRP is uniquely suited to support a national policy that promotes global health.

In a recent speech as part of the Landon Lecture series, Secretary of Defense Robert M. Gates declared:

If we are to meet the myriad challenges around the world in the coming decades, this country must strengthen other important elements of national power both institutionally and financially, and create the capability to integrate and apply all of the elements of national power to problems and challenges abroad . . . I am here to make the case for strengthening our capacity to use “soft” power and for better integrating it with “hard” power.”²⁸

To meet current national security challenges, the U.S. needs to apply all the resources of American power, both hard and soft. Our ongoing commitment to fighting the HIV/AIDS pandemic and other potential pandemic diseases in Africa and other areas around the world further supports U.S. and allied vital interests. Based on the definitions presented above and the U.S. commitment to utilize its soft power assets as an extension of its proven hard power assets, military medical research is well positioned to enhance U.S. global influence.

For more than a century, the military medical community has solved many significant international health problems, particularly in the area of tropical infectious diseases. Military sponsored research in the U.S. and abroad has produced antibiotic cures for typhoid and scrub typhus, new anti-malarial drugs, and highly effective vaccines for yellow fever, meningococcal meningitis, encephalitis, and adenovirus caused respiratory disease – all deadly diseases confronting the developing world.”²⁹

Today, cutting-edge vaccine development continues for prevention of HIV/AIDS, malaria, dengue, and other enteric diseases. For the past two decades, the USMHRP has been in the forefront of the battle against HIV/AIDS, bringing the latest in research and technology to the field to serve our military and national interests.³⁰

The U.S. military battle against HIV/AIDS is waged through a Tri-Service Program, which is an excellent example of service cooperation that integrates Navy, Air Force, and Army scientists in pursuit of a common goal. Research is conducted in collaboration with the Henry M. Jackson Foundation for the Advancement of Military Medicine, a non-profit organization that facilitates and conducts military medical research.³¹ The search for an effective vaccine remains the single best hope for the control of the HIV/AIDS pandemic. Over the past twenty years, the quest for an HIV/AIDS vaccine has been built on a solid scientific platform and research infrastructure to discover an effective preventive vaccine.³² The underlying goal of the military medical research efforts has been to identify the threat of HIV/AIDS to our Armed Forces, to develop new diagnostic technologies for use in the field, and to provide effective strategies to mitigate and eventually eliminate the disease. A secondary goal is to capitalize on these discoveries in order to control the international proliferation of HIV/AIDS.³³

Military medical research is well positioned for success in the HIV/AIDS battle in Africa as illustrated in the Pew Global Attitudes Project that measured the dimensions of American attractiveness. Greater than eighty-five percent of Africans surveyed admired the U.S. for its technological and scientific advances.³⁴ By fully utilizing and building on an established USMHRP laboratory network, the U.S. is postured better than any other

nation in the world to lead an international effort to counter the HIV/AIDS threat in Africa. The established DoD laboratory presence in seven overseas locations strategically places key scientific assets with the ability to assess HIV/AIDS prevalence in real time through an effective surveillance network that monitors the emergence of new virologic strains while serving as a platform to evaluate candidate vaccines in overseas endemic settings.³⁵ Four of these DoD laboratories are operated by the U.S. Army, located in Brazil, Germany, Kenya, and Thailand. Three additional U.S. Navy laboratories are operated in collaboration with the HIV/AIDS medical research mission. These facilities are located in Indonesia, Peru, and Egypt.³⁶ Military and DoD scientists conduct population-based HIV/AIDS surveillance and use collected data to assess the risks of HIV/AIDS infection, to help prepare and educate the population in prevention techniques, and to develop effective preventive modalities to include vaccine development.³⁷

Military Medical Research and the Instruments of National Power

Achievement of U.S. national strategic objectives depends upon our ability to employ the instruments of national power – diplomatic, informational, military, and economic (DIME) – in an integrated, synchronized and properly balanced manner. These valuable tools are supported by U.S. culture, human potential, industry, science and technology, academic institutions, geography, and national will.³⁸ “At the President’s direction through the interagency process, military power is integrated with the other instruments of national power to advance and defend U.S. values, interests, and objectives.”³⁹ To accomplish this integrated effort, the armed forces must coordinate closely with other involved agencies to ensure common understanding

across the whole of government of the capabilities and limitations of integrated efforts. Our leaders must constantly seek ways that military and civilian actions can best complement each other.⁴⁰

As defined in Joint Publication 1, "Doctrine for the Armed Forces of the United States," diplomacy is defined as "the principal instrument for engaging with other states and foreign groups to advance US values, interests, and objectives." Based on this definition, perhaps the single most important diplomatic healthcare initiative that will mark the legacy of President George W. Bush is the establishment and implementation of the PEPFAR program. President Bush announced the PEPFAR program during his 2003 State of the Union Address as a five-year, \$15 billion dollar initiative to combat global HIV/AIDS.⁴¹ The goals of the PEPFAR program included reaching two million people with life-saving antiretroviral (ARV) drugs, preventing seven million new infections, and providing care to ten million people affected by the disease.⁴² As a true indicator of the U.S. commitment to the initiative, annual appropriations to the PEPFAR program have increased significantly from \$2.3 billion in FY2004 to \$4.6 billion in FY2007.⁴³ The recently signed PEPFAR Reauthorization Legislation authorizes up to \$48 billion over the next ten years to combat global HIV/AIDS along with tuberculosis and malaria, and further illustrates the obligation of this kind of resources to support the NSS.⁴⁴ The additional PEPFAR funding will allow the initiative to deliver even better results by enabling it to reach a total of more than two and a half million people with ARVs. This enhanced effort will prevent a total of twelve million new infections and provide care to more than twelve million people, including five million orphans.⁴⁵

The majority of PEPFAR financing focuses on fifteen of the hardest hit HIV/AIDS countries in Africa, the Caribbean, and Asia; it includes countries in the USMHRP area of operation as well.⁴⁶ The fifteen identified countries are Botswana, Cote d'Ivoire, Ethiopia, Guyana, Haiti, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Zambia, and Vietnam.⁴⁷ USMHRP's successful HIV/AIDS medical research program in Kenya is an excellent example of the results of the PEPFAR program. It has led to the prevention of infections, delivered life-saving ARV treatment to the infected population, and improved the productivity of tea plantation workers in the African Highlands of Kericho.⁴⁸ U.S. Army Medical Research Unit-Kenya (USAMRU-K) is a Special Foreign Activity of the Walter Reed Army Institute of Research (WRAIR).⁴⁹ USAMRU-K works with the host nation through a Cooperative Agreement with the Kenya Medical Research Institute (KEMRI).⁵⁰ The unit was originally established at the invitation of the Government of Kenya to study trypanosomiasis and became a permanent overseas activity of WRAIR in 1973.⁵¹ Over the past thirty-two years, USAMRU-K's major research has focused on malaria, trypanosomiasis, leishmaniasis, entomology, HIV/AIDS, and arboviruses.⁵² These three decades of in-country research have had the added effect of providing the local population with a positive impression of the U.S. and its military.

USAMRU-K supports the diplomatic instrument of power by providing in country technical assistance in the administration of the PEPFAR program through direct working relationships with the Kenyan Department of Defense and other governmental agencies participating in the Kenyan PEPFAR program.⁵³ Additionally, USAMRU-K works closely with the Kenyan U.S. Liaison Office and the U.S. Central Command

(USCENTCOM) field office for coordination of U.S. Security Assistance programs, USCENTCOM contingency operations, and training exercises in Kenya. Further, USAMRU-K ensures that all goals and objectives of USCENTCOM Theater Security Cooperation Program (TSCP) are met.⁵⁴

While the information instrument of national power has long been part of the DIME, it is arguably the least understood and perhaps the most complex of its components. Information power is exercised in a wide range of ways, such as public policy statements; systems in the electronic realm like cellular phones; print and video media; and the newly recognized cyberspace domain which includes the internet; as well as many other types of “outside the box” possibilities. Another instrument of informational power is strategic communication. The U.S. National Strategy for Public Diplomacy and Strategic Communication (NSPDSC) outlines several actions that enable the military research community participation to exploit and further promote its success in health education and training, disease treatment and prevention, as well as other regional medical interventions designed to improve African and global public health.

First, in the area of public diplomacy, the USMHRP is often recognized for its substantial contributions in support of the fight against HIV/AIDS and its implementation of the PEPFAR program. This type of recognition assures the USMHRP staff that their efforts are making a difference; it also informs the local population that they are truly important in the eyes of the U.S. thereby supporting the “winning of the hearts and minds” goal implied in the NSS. Consider the remarks of U.S. Ambassador to the

United Republic of Tanzania Mark Green during his speech at the WRAIR/USMHRP scientific investigators meeting in November 2007:

The United States Military HIV Research Program's global successes are an example of how international, collaborative science can advance these efforts. The entity of the United States Military HIV Research Program, and its many facets, makes it a complex player in the HIV/AIDS field. But among the layers of complexity is a program with a real-life story to tell--the story of advancing public healthcare worldwide.⁵⁵

U.S. Ambassador to Nigeria John Campbell delivered another positive public diplomacy statement that championed the important work of USMHRP in the fight against HIV/AIDS. During his ceremonial remarks, he emphasized that the DoD through USMHRP "has forged a mutually beneficial partnership with the Nigerian Ministry of Defense, not only in terms of military-to-military cooperation, but also in opening up a new front in the war on HIV/AIDS worldwide."⁵⁶ The work of USMHRP in the support of the PEPFAR program supports many of the "diplomacy of deed" programs that are cited in the National Strategy for Public Diplomacy and Strategic Communication. These programs include the treatment of HIV/AIDS, malaria and tuberculosis; health education; training of in country medical professionals; and building healthcare infrastructure. Through programs like these, USMHRP communicates American values through actions that are far more effective than words alone. They have elicited the highest approval ratings of U.S. leadership in sub-Saharan Africa in the last decade.⁵⁷ According to recent Gallop Polls, these high approval numbers (which are twice as high as in any other area in the world) are indicative of the substantial benefits of humanitarian and public health initiatives like PEPFAR that are being implemented on the African continent.⁵⁸ Additionally, the most recent 2008 Pew Global Attitudes survey finds that favorable views of America edged up and that the highest

favorable marks received by the U.S. were in sub-Saharan Africa, especially in the area of humanitarian assistance.⁵⁹

Military medical research has a long history in military operations-other-than-war and in peace support operations. One program through which this implementation of national power takes place is military-to-military contacts. Perhaps one of the best and longest standing examples of such contact is the USMHRP unit located in Thailand, the Armed Forces Research Institute of Medical Sciences (AFRIMS). AFRIMS, a joint U.S.-Thai command, was formed in 1959 in Bangkok, Thailand, as the Southeast Asia Treaty Organization (SEATO) Cholera Research Laboratory.⁶⁰ The mission of the AFRIMS is to conduct collaborative research on tropical diseases endemic to Thailand and Southeast Asia. Although initially designated to conduct scientific research on various aspects of the cholera epidemic in Thailand, SEATO expanded the laboratory's mission in 1961 to include research on other tropical diseases.⁶¹ Since the dissolution of SEATO in 1977, AFRIMS has operated and expanded the laboratory as a joint US-Thai military medical research venture.

AFRIMS is composed of both U.S. and Royal Thai Army components. Overall command rests with a Royal Thai Army Officer of flag rank. The U.S. component functions as a Special Foreign Activity of the WRAIR and MRMC. AFRIMS, the largest of three overseas U.S. Army biomedical research facilities, emphasizes basic research and field testing new treatments for tropical disease threats: HIV/AIDS, malaria, hepatitis, diarrhea, dengue, and Japanese encephalitis.⁶² For over forty years, AFRIMS has played a vital role in the study of tropical diseases. It has conducted cutting-edge research and development projects that address the medical threats facing

U.S. forces now deployed in over 75 countries worldwide. Further, it has assisted local governments on health care issues. Personnel assigned to AFRIMS have contributed to medical policy for deployed troops by providing expert medical advice, medical intelligence, and on-the-ground assistance. For example, AFRIMS has supported joint US-Thai military exercises in Thailand for the last seven years (Cobra Gold and Balance Torch).⁶³ This support included surveying diarrheal diseases, presenting lectures to medical units, providing hands-on training on medical equipment and procedures, and providing current epidemiological data to personnel responsible for preventive medicine.

Likewise, military medical research units provide military-to-military support in such issues as addressing risk, prevention, and treatment of HIV/AIDS in the military forces of sub-Saharan Africa. The armed forces of sub-Saharan Africa constitute a significant percentage of the population in many African countries. Military units are highly mobile and often called upon to serve at borders, in peacekeeping operations, or on deployments outside of national boundaries. In such missions, military personnel are at special risk for exposure to HIV/AIDS. Current estimates indicate that ten to sixty percent of sub-Saharan African military personnel have tested HIV/AIDS positive.⁶⁴ Peacekeepers face a higher than average risk of exposure to HIV/AIDS. For example, Nigerian military personnel who worked as peacekeepers in the late 1990s had a HIV-prevalence rate of seven percent after one year of peacekeeping duties; this increased to ten percent after two years, and to fifteen percent after three years of peacekeeping operations.⁶⁵

Government officials and senior military leaders have recognized that HIV/AIDS is debilitating their military forces and a direct threat to their national security. Armed

forces provide basic natural defense and enhance stability within a state and between states. If military forces become debilitated by disease, national security is compromised. Foreign and domestic threats to a country's national security are aggravated by the security vacuum left by weakened military forces. So HIV/AIDS stricken militaries are a particular concern in sub-Saharan Africa. The International Crisis Group (a private multinational organization devoted to understanding and preventing conflict) warns that "even the perception that a neighbor's military is suffering from an AIDS epidemic, suggesting a tactical advantage, may trigger wars".⁶⁶ In weak states with divided societies (a common feature of many countries in sub-Saharan Africa), opposition groups could be tempted to exploit the perceived weakness of armed forces debilitated by disease through instigation of civil unrest or by toppling the ruling elite. The ongoing work between military research units and host nation military units like those taking place between AFRIMS and the Royal Thai Military exemplify the collaborative effort to achieve positive change in combating HIV/AIDS in sub-Saharan African military forces.

HIV/AIDS is having a huge detrimental influence on the economies of sub-Saharan Africa countries. The impact of HIV/AIDS affects both the production and the consumption components of a nation's economy; the disease has the second order effect of discouraging long-term foreign investments in the region. The abilities of African countries to diversify their industrial base, expand exports, and attract foreign investment are instrumental to economic progress in the region. By making labor more expensive and reducing profits, HIV/AIDS limits the ability of African countries to attract industries that depend on low-cost labor, which makes investments in African

businesses less desirable. For example, studies have shown that tea plantation workers in Kenya affected with HIV/AIDS are seventeen percent less productive when at work and are absent on average sixty days more a year than those not infected with HIV/AIDS.⁶⁷ This evidence illustrates how HIV/AIDS threatens the foundations of economic development in Africa. The negative consequences of HIV/AIDS are detrimental to U.S. national interests in the region because HIV/AIDS contributes to increased political instability, decreased economic productivity, and impaired democratic development – all detrimental to U.S. policy that supports a growing and stable sub-Saharan Africa.

To improve workforce productivity in sub-Saharan Africa and other PEPFAR target countries stricken workers need ARV drugs. The use and distribution of ARV drugs to Kenyan tea plantation workers has directly resulted in the reduction of absenteeism, maintenance of highly developed skill sets, increased family income, and improved quality of life.⁶⁸ Another study evaluating the work of the Thailand Ministry of Health, with support from AFRIMS, showed that among HIV/AIDS patients undergoing ARV drug treatment, six percent found new or better employment and another forty percent improved their productivity.⁶⁹ Additionally, the income of twenty-six percent of those studied increased, while only five percent experienced an income decrease.⁷⁰ This evidence confirms the ARV drug program administered by the USMHRP and funded by PEPFAR is improving the economic outlook of HIV/AIDS targeted countries.

Recommendations

This strategy research project (SRP) has discussed the merits of military medical research as a key soft power asset for protecting U.S. vital interests in the global fight

against HIV/AIDS and the promotion of global health. The challenge is to advance this asset beyond the scope of its current use in ways that will further enhance the promotion and protection of American interests. This can be accomplished through a three step approach: First, the new presidential administration should build upon the tremendous accomplishments made by the Bush administration through the PEPFAR program. While the Obama administration has not made any Africa policy statements during its first thirty days in office, his statements during the presidential campaign indicate that HIV/AIDS and a PEPFAR-type program will continue as priorities for his administration. In 2006, President Obama traveled to Kenya to speak about the deadly consequences of HIV/AIDS. While there, he encouraged all African men and women to get tested for the HIV/AIDS virus.⁷¹ During his campaign, he pledged that if elected he would continue to be the world leader in the fight against HIV/AIDS and other deadly diseases like malaria, Ebola, and tuberculosis. Specifically, he pledged to increase the number of HIV/AIDS infected people receiving ARV treatment, to expand the number of assisted countries from the current fifteen, to expand the program by including diseases like malaria and tuberculosis, to significantly increase the funding for HIV/AIDS research, and, most importantly, providing at least \$50 billion dollars by 2013.⁷² These pledges would expand the PEPFAR program in a way that sustains and advances the role of military medical research in the global fight against HIV/AIDS, malaria, tuberculosis, and pandemic influenza.

Second, military medical research should be a central component in the U.S. Africa Command (USAFRICOM) engagement strategy and theater security cooperation plan (TSCP). Two of the stated USAFRICOM objectives in its engagement strategy for

“active security” are to “mitigate HIV/AIDS and other public health threats in the security sector;” and “support DoD national security objectives in ways that other agencies cannot.”⁷³ Since the USMHRP has a proven record of success in battling HIV/AIDS and supporting DoD national security objectives in Kenya and Thailand, USAFRICOM could effectively use the USMHRP organizational template as it engages across the African continent in the areas of health promotion and public health. The USMHRP has documented success in winning over local African populations, in increasing productivity of local workforces, and in creating a positive view of U.S. policy and intentions.

Finally, the new administration should further optimize the use of the information instrument of national power to laud military medical research as a component of soft power. While the USMHRP has made improvements in its website and initiated a monthly newsletter to inform the public of its medical research accomplishments, much more is possible through capitalizing on the far-reaching capabilities of the internet and global information. One recommendation to improve the information campaign for the USMHRP is build a public affairs operation within the organization. The USMHRP has an interesting and worthwhile story to communicate, and the comparatively minor investment required to launch a comprehensive message has the potential to provide a substantial return on investment in the areas of U.S. and host nation public support, increasing support from other agencies, and casting U.S. global health initiatives in a positive light.

Conclusion

In conclusion, this SRP has shown in detail how military medical research and specifically how the USMHRP directly contributes to the “whole of government”

approach in supporting national policy objectives and furthering vital U.S. strategic interests by countering the HIV/AIDS pandemic in the killing fields of third world countries. The NSS, NSHS, DoS and USAID strategic plan directly address the potentially adverse impacts that the HIV/AIDS pandemic exerts on the stability of the world's political, economic, and military balance of power. Military medical research is ideally positioned to lead in the fight against this deadly disease. The contributions that military medical research makes in the development of U.S. soft power wins the "hearts and minds" of assisted populations through humanitarian support, development of improved healthcare infrastructure, and most importantly through the pioneering PEPFAR program.

Additionally, military medical research supports the national instruments of power (DIME). The USMHRP's contribution to the PEPFAR program demonstrates how military medical research supports the diplomatic instrument of national power. Public diplomacy statements, programs that support the "diplomacy of deed," and the positive Gallop and Pew results earned by military medical research efforts on the African continent, demonstrate successful use of the information instrument of national power by the military medical research community. Military-to-military contacts with the Royal Thai Army and work with the militaries of sub-Saharan Africa countries demonstrates the effectiveness of the military instrument of national power. Lastly, the use of techniques like ARV therapy delivered by military medical research units to improve worker productivity and improve economic stability demonstrates effective use of the economic instrument of national power.

Endnotes

¹ U.S. Department of State, "Address at United Nations Special Session on HIV/AIDS," <http://www.state.gov/secretary/former/powell/remarks/2001/3756.htm> (accessed December 13, 2008).

² "AIDS Epidemic Update" *UNAIDS and World Health Organization*, Geneva, Switzerland (Dec. 2003).

³ John W. Sanders et al., "The Epidemiological Transition: The Current Status of Infectious Diseases in the Developed World versus the Developing World," *Science Progress* 9, no. 1(March 2008): 19.

⁴ Jordan S. Kassalow, "Why Health Is Important to U.S. Foreign Policy, Council on Foreign Relations," April 19, 2001, http://www.cfr.org/publication/8315/why_health_is_important_to_us_foreign_policy.html (accessed November 9, 2008).

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ George W. Bush, *The National Security Strategy of the United States of America* (Washington, DC: The White House, March 2006), 31.

¹² USAMRMC Chemical Biological Defense Partnership Support Directorate, "RAD 4 - Medical Chemical and Biological Defense Research Program (MCBDRP)," <https://mrmc-www.army.mil/mrdrads.asp#RAD4> (accessed December 6, 2008).

¹³ Walter Reed Army Institute of Research, "U.S. Meeting Highlights On-going Support for TPDF HIV/AIDS Programs," <http://wrair-www.army.mil/index.php?view=walterReedTpdfVisit> (accessed December 6, 2008).

¹⁴ George W. Bush, *National Strategy for Homeland Security* (Washington, DC: The White House, October 2007), 1.

¹⁵ Ibid., 5.

¹⁶ George W. Bush, *National Strategy for Homeland Security*, 29-30.

¹⁷ Ibid., 25.

¹⁸ USAMRMC, "Chemical Biological Defense Partnership Support Directorate (PSD)," <http://medchembio.amedd.army.mil/> (accessed December 6, 2008).

¹⁹ U.S. Agency International Development, *Report to Congress: Health-Related Research and Development Activities at USAID* (Washington, DC: U.S. Agency International Development, May 2006), 14.

²⁰ Ibid., 22.

²¹ USAID, "Health HIV/AIDS, Overview," http://www.usaid.gov/our_work/global_health/aids/ (accessed December 6, 2008).

²² U.S. Department of State and U.S. Agency for International Development, *Strategic Plan Fiscal Years 2007-2012* (Washington, DC: U.S. Department of State and U.S. Agency for International Development, May 7, 2007), 25.

²³ Ibid., 35.

²⁴ Joseph S. Nye Jr., *Soft Power*, (New York, NY: Public Affairs, 2004), x.

²⁵ Joseph S. Nye, "Think Again: Soft Power," March 1 2006, <http://yaleglobal.yale.edu/display.article?id=7059> (accessed November 9, 2008).

²⁶ U.S. Department of the Army, *Stability Operations*, Field Manual 3-07 (Washington, DC: U.S. Department of the Army, October 2008), Forward.

²⁷ Ibid.

²⁸ Remarks as Delivered by Secretary of Defense Robert M. Gates, Manhattan, Kansas, Monday, November 26, 2007 at <http://www.defenselink.mil/speeches/speech.aspx?speechid=1199> (accessed November 9, 2008).

²⁹ Walter Reed Army Institute of Research, "More than 100 years at WRAIR," <http://wrair-www.army.mil/index.php?view=100years> (accessed December 6, 2008).

³⁰ U.S. Military HIV Research Program, "About USMHRP," <http://www.hivresearch.org/about/index.html> (accessed December 6, 2008).

³¹ Ibid.

³² U.S. Military HIV Research Program, "Vaccine Research and Development," <http://www.hivresearch.org/vaccine/index.html> (accessed December 6, 2008).

³³ Ibid.

³⁴ Nye, *Soft Power*, 71-72.

³⁵ Department of Defense Human Immunodeficiency Virus Research Program, "Information Paper," December 21, 2007, <http://wrair-www.army.mil/images/HIVInfoPaperDec07.pdf> (accessed November 9, 2008).

³⁶ Ibid.

³⁷ Ibid.

³⁸ Joint Chiefs of Staff, *Doctrine for the Armed Forces of the United States*, Joint Publication 1 (Washington, DC: Joint Chiefs of Staff, May 14, 2007), x.

³⁹ Ibid, 1-8.

⁴⁰ Ibid.

⁴¹ President's Emergency Plan for AIDS Relief (PEPFAR), "What is PEPFAR?," <http://www.avert.org/pepfar.htm> (accessed December 6, 2008).

⁴² Ibid.

⁴³ Ibid.

⁴⁴ The United States President's Emergency Plan for AIDS Relief, "President Bush Signs PEPFAR Reauthorization Legislation," <http://www.pepfar.gov/> (accessed December 6, 2008).

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ U.S. Army Medical Research Unit of Kenya, "HIV Program Overview," <http://www.usamrukenya.org/hiv.htm> (accessed December 6, 2008).

⁴⁹ U.S. Army Medical Research Unit of Kenya, "USAMRU-Kenya," <http://www.usamrukenya.org/default.htm> (accessed December 6, 2008).

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Ibid.

⁵³ U.S. Agency International Development, *Report to Congress: Health-Related Research and Development Activities at USAID*, 14.

⁵⁴ Ibid.

⁵⁵ Embassy of the United States DARESSALLAM-Tanzania, "Speech, Walter Reed/U.S. Military HIV Research Program Scientific Investigators Meeting," http://tanzania.usembassy.gov/sp_11042007.html (accessed December 6, 2008).

⁵⁶ New York Times Health, "The War on Dengue Fever," http://www.nytimes.com/2008/11/04/health/04denguefever.html?_r=2&ref=science (accessed December 6, 2008)

⁵⁷ Julie Ray, "U.S. Leadership Approval Highest in Sub-Saharan Africa," April 8, 2008, <http://www.gallup.com/poll/106306/US-Leadership-Approval-Highest-SubSaharan-Africa.aspx> (accessed December 13, 2008).

⁵⁸ Ibid.

⁵⁹ Pew Global Attitudes Project, "Global Public Opinion in the Bush Years (2001-2008)," <http://pewglobal.org/reports/display.php?ReportID=263> (accessed January 10, 2009).

⁶⁰ Armed Forces Research Institute of Medical Sciences, "About AFRIMS," <http://www.afrims.org/media/af-brochure2008.pdf> (accessed December 13, 2008).

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Radhika Sarin, "A new security threat: HIV/AIDS in the military," March-April, 2003, http://findarticles.com/p/articles/mi_hb6376/is_2_16/ai_n28986723/pg_1?tag=artBody;col1 (accessed December 13, 2008).

⁶⁵ Ibid.

⁶⁶ HIV/AIDS as a security issue, ICG Report, International Crisis Group, June 2001, Washington DC, p 21.

⁶⁷ M.P. Fox et al., "The Impact of HIV/AIDS on Labor Productivity in Kenya," *Tropical Medicine & International Health* 9, no. 3 (March 2004): 318-319.

⁶⁸ Ibid.

⁶⁹ Supakankunti S, Witanee P, Tsunekawa K, "Antiretroviral Therapy Increases Productivity of People Living with HIV/AIDS - a Preliminary Report from Thailand," International Conference on AIDS (15th : 2004 : Bangkok, Thailand).

⁷⁰ Ibid.

⁷¹ Obama'08, "Barack Obama: Fighting HIV/AIDS Worldwide," <http://www.barackobama.com/pdf/AIDSFactSheet.pdf> (accessed February 10, 2009).

⁷² Ibid.

⁷³ Isaac Kfir, "The Challenge That is USAFRICOM," *Joint Force Quarterly* 49, no. 2 (2008): 111.